

REMARKS

The present Amendment amends claims 3-5 and cancels claim 2. Therefore, the present application has pending claims 3-5.

Support for Amendments

The amendments are fully supported by the disclosure. For example, the amendments to the claims are fully supported by: paragraph [0029]; Fig. 2; and paragraph [0043] of U.S. Patent Application Publication No. 2004/0117506 ("Pre-Grant Publication") of the present application.

35 U.S.C. §103 Rejections

Claims 2 and 3 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 7,120,131 to Seppala et al. ("Seppala") in view of U.S. Patent Application Publication No. 2003/0193921 to Kim ("Kim"). As previously indicated, claim 2 was canceled. Therefore, this rejection regarding claim 2 is rendered moot. Regarding the remaining claim 3, this rejection is traversed for the following reasons. Applicants submit that the features of the present invention, as now more clearly recited in claim 2, are not taught or suggested by Seppala or Kim, whether taken individually or in combination with each other in the manner suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to the claims to more clearly describe features of the present invention. Specifically, amendments were made to the claims to more clearly recite that the present invention is directed to a third information processing apparatus as recited, for example, in independent claim 3.

The present invention, as recited in claim 3, provides a third information processing apparatus. The third information processing apparatus is on a network and provides rent-out of an address, and includes: an Internet Protocol (IP) address

pool including rent-out virtual IP addresses; a receiver that receives a virtual IP address rent-out request from a first information processing apparatus, the virtual IP address rent-out request including an original real IP address of a second information processing apparatus; a storage that stores correspondence information having a correspondence relationship among an original real IP address of the first information processing apparatus, a rent-out virtual IP address, and the original real IP address of the second information processing apparatus included in the virtual IP address rent-out request; and a transmitter that transmits the a rent-out virtual IP address to the first information processing apparatus.

According to the present invention, the first information processing apparatus sends communication packets to the second information processing apparatus, the communication packets including the rent-out virtual IP address as a source address, and the original real IP address of the second information processing apparatus as a destination address. The prior art does not teach or suggest all of these features.

The above described features of the present invention, as now more clearly recited in the claims, are not taught or suggested by any of the references of record. Specifically, the features are not taught or suggested by either Seppala or Kim, whether taken individually or in combination with each other.

Seppala teaches selection of serving network element in a telecommunications network. However, there is no teaching or suggestion in Seppala of the third information processing apparatus as recited in claim 3 of the present invention.

Seppala discloses a method of selecting the serving network element in a telecommunications network. Mobility agents or routers transmit attribute information on one or more network elements in advertising messages to at least

one mobile node. This information is used in the mobile node for selecting the serving network element.

Features of the present invention, as recited in claim 3, include a storage that stores correspondence information having a correspondence relationship among an original real IP address of the first information processing apparatus, a rent-out virtual IP address, and the original real IP address of the second information processing apparatus included in the virtual IP address rent-out request; and a transmitter that transmits the a rent-out virtual IP address to the first information processing apparatus, where the first information processing apparatus sends communication packets to the second information processing apparatus, the communication packets including the rent-out virtual IP address as a source address, and the original real IP address of the second information processing apparatus as a destination address. Seppala does not disclose this combination of features.

The Examiner relies upon Seppala for teaching a storage that stores correspondence information, as previously presented in the claims, citing column 6, lines 12-23. However, neither the cited text, nor any other portion of Seppala, teaches or suggests the claimed feature, as now more clearly recited in the claims.

As described in paragraph [0029] of the Pre-Grant Publication of the present application, the present invention provides where a first information processing apparatus requests a rent-out address by sending a request to a third information processing apparatus. The request includes a real IP address of a second information processing apparatus, which is the communication destination of the first information processing apparatus. The first information processing apparatus executes communication using the requested rent-out address. In addition, as shown in Fig. 2 of the present application, the third information processing apparatus stores

the real IP address of the second information processing apparatus received from the first information processing apparatus, in correspondence with the rent-out address.

Accordingly, as described in paragraph [0043] of the Pre-Grant Publication of the present application, the present invention has a great effect that the third information processing apparatus can respond only to a question from the correspondent information apparatus, thereby improving the reliability of communication via the network. Applicants submit that the features of the present invention, which cause this great effect, are quite different from Seppala.

For example, Seppala does not teach or suggest receiving and storing correspondence information including a real address of the second information processing apparatus, which is the communication destination. The Examiner cites column 6, lines 12-23 to support the assertion that Seppala teaches receiving and storing correspondence information including an address of the second information apparatus, apparently asserting that the care-of-address (COA) list corresponds to the correspondence information.

Contrary to the Examiner's assertions, the COA list of Seppala is not the same as the correspondence information of the present invention. As best as could be determined, it appears that the Examiner contends that the COA list of Seppala corresponds to the rent-out address of the present invention, the home address of a mobile node corresponds to an original IP address of the first information processing apparatus, and the home agent corresponds to the third information processing apparatus. However, as described in column 6, lines 16-17, the COA list only includes the COA of a foreign agent and the home address of a mobile node. Accordingly, the COA list does not include an address of a second information

processing apparatus, which is a communication destination, as in the present invention (see, e.g., the corresponding host (CH) in Fig. 1 of Seppala).

Furthermore, as conceded by the Examiner, Seppala does not disclose where the first information processing apparatus sends communication packets to the second information processing apparatus, the communication packets include said rent-out IP address as a source address, and said IP address of said second information processing apparatus as a destination address, in the manner claimed. The Examiner relies upon Kim for teaching this feature, and as discussed in more detail below, under the discussion regarding Kim, Applicants submit that the Kim does not teach or suggest the feature as claimed.

Further, Applicants submit that Sepalla is related to mobile IP, and the Care-of Addresses (COA) used in the Sepalla are real addresses. On the other hand, rent-out addresses in the present invention are virtual addresses. Accordingly, the present invention is not the same as Sepalla.

Therefore, Sepalla fails to teach or suggest "a storage that stores correspondence information having a correspondence relationship among an original real IP address of said first information processing apparatus, a rent-out virtual IP address, and said original real IP address of said second information processing apparatus included in said virtual IP address rent-out request; and a transmitter that transmits said a rent-out virtual IP address to said first information processing apparatus, wherein said first information processing apparatus sends communication packets to said second information processing apparatus, said communication packets including said rent-out virtual IP address as a source address, and said original real IP address of said second information processing apparatus as a destination address" as recited in claim 3.

The above noted deficiencies of Seppala are not supplied by any of the other references of record, namely Kim, whether taken individually or in combination with each other. Therefore, combining the teachings of Seppala and Kim in the manner suggested by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Kim teaches a method and apparatus for managing an Internet protocol using network address translation in a mobile network. However, there is no teaching or suggestion in Kim of the third information processing apparatus as recited in claim 3 of the present invention.

Kim discloses a method and apparatus for managing a mobile Internet protocol (IP) using network address translation (NAT) in a mobile network. The method includes periodically receiving an agent information message from an agent on a network, and checking a connection to a home network or a foreign network. If a connection to the home network is determined based on the agent information message, a global IP address received from the agent of the home network and local IP addresses set a plurality of hosts included in the mobile network are registered, and communication with the home network is performed through conversion between the registered global IP address and each of the registered local IP addresses. If a connection to the foreign network is determined based on the agent information message, a temporary IP address is received from the agent of the foreign network. The temporary IP address is registered with the local IP addresses set at the hosts, and communication with the foreign network is performed through conversions between the registered temporary IP address and each of the registered local IP addresses.

Features of the present invention, as recited in claim 3, include a storage that stores correspondence information having a correspondence relationship among an

original real IP address of the first information processing apparatus, a rent-out virtual IP address, and the original real IP address of the second information processing apparatus included in the virtual IP address rent-out request; and transmitter that transmits the a rent-out virtual IP address to the first information processing apparatus, where the first information processing apparatus sends communication packets to the second information processing apparatus, the communication packets including the rent-out virtual IP address as a source address, and the original real IP address of the second information processing apparatus as a destination address. Kim does not disclose this combination of features.

The Examiner merely relies upon Kim for teaching where the first information processing apparatus sends communication packets to the second information processing apparatus, the communication packets including the rent-out virtual IP address as a source address, and the original real IP address of the second information processing apparatus as a destination address, citing Figs. 5-7 and paragraphs [0034]-[0041]. However, neither the cited drawings or text, nor any other portion of Kim teaches or suggests the claimed feature.

For example, Kim does not teach the use of virtual addresses, in the manner claimed. The addresses disclosed in Kim are real addresses, whereas the rent-out address in the present invention is a virtual address. Accordingly, Kim does not teach or suggest sending the rent-out virtual IP address as a source address, in the manner claimed. For at least these reasons, the present invention distinguishes over Kim.

Therefore, Kim fails to teach or suggest "a storage that stores correspondence information having a correspondence relationship among an original real IP address of said first information processing apparatus, a rent-out virtual IP

address, and said original real IP address of said second information processing apparatus included in said virtual IP address rent-out request; and a transmitter that transmits said a rent-out virtual IP address to said first information processing apparatus, wherein said first information processing apparatus sends communication packets to said second information processing apparatus, said communication packets including said rent-out virtual IP address as a source address, and said original real IP address of said second information processing apparatus as a destination address" as recited in claim 3.

Both Seppala and Kim suffer from the same deficiencies, relative to the features of the present invention, as recited in the claims. Therefore, combining the teachings of Seppala and Kim in the manner suggested by the Examiner does not render obvious the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of claim 3 as being unpatentable over Seppala in view of Kim are respectfully requested.

Claims 4 and 5 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Seppala in view of U.S. Patent No. 7,317,798 to Saito ("Saito"). This rejection is traversed for the following reasons. Claims 4 and 5 are dependent on claim 3. Therefore, claims 4 and 5 are allowable for at least the same reasons previously discussed regarding independent claim 3.

NOTE: Applicants note that the Examiner rejects claims 4 and 5 as being obvious over Seppala in view of Saito, while independent claim 3 is rejected as being obvious over Seppala in view of Kim. Therefore, it appears that the Examiner has inadvertently failed to include Kim in the rejection of claims 4 and 5. For clarification

of the prosecution history, Applicants respectfully request the Examiner to provide confirmation of the correct grounds for the rejection of claims 4 and 5.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references used in the rejection of claims 3-5.

In view of the foregoing amendments and remarks, Applicants submit that claims 3-5 are in condition for allowance. Accordingly, early allowance of claims 3-5 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of BRUNDIDGE & STANGER, P.C., Deposit Account No. 50-4888 (referencing Attorney Docket No. 500.42924X00).

Respectfully submitted,

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